

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.

**I. General Remarks Concerning This Response**

Claims 1-21 are currently pending in the present application. No claims have been amended, added, or canceled in this response. Reconsideration of the claims is respectfully requested.

Applicant notes that the Office action acknowledged the informal drawings that were filed on 12/15/2000 with the patent application. However, a set of formal drawings were filed with the PTO on 06/04/2001. Applicant requests an acknowledgment of the receipt of the formal drawings and an indication of whether or not the formal drawings were acceptable.

**II. Summary of Present Invention**

A method, system, apparatus, and computer program product are presented for management of a distributed data processing system. Resources within the distributed data processing system are dynamically discovered, and the discovered resources are adaptively monitored using the network management framework. A network or system administrator configures some mission critical endpoints with multiple network interface cards (NICs) and specifies mission critical endpoints, non-mission critical actions, etc. During status collection activities associated with network or system management activities, the categorization of an endpoint as a mission-critical or non-mission critical endpoint affects the manner in which the status collection activity is performed. Applications can request the performance of actions at endpoints without regard to the categorization of the endpoint or without regard to the categorization of the requested action, and the network management system routes the action based on whether or not the specified endpoint is a mission critical endpoint. A non-mission-critical endpoint is associated with a mission-critical endpoint based on the non-mission-critical endpoint's communication history with the

mission critical endpoint. The management system may use the status of a non-mission-critical endpoint as a reflection of the status of a mission-critical endpoint.

5     **III. 35 U.S.C. § 101-Double Patenting**

The Office action has rejected claims 1-21 of the present patent application in an obviousness-type double patenting rejection over claims 1-24 of co-pending U.S. patent application 09/737,431, which is also assigned to IBM and has common  
10 co-inventors with the present application. This rejection is respectfully traversed.

MPEP § 804 states the following:

15     Since the analysis employed in an obviousness-type double patenting determination parallels the guidelines for a 35 U.S.C. 103(a) rejection, the factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103 are employed when making an obviousness-type double patenting analysis.

20     ... Any obviousness-type double patenting rejection should make clear:

25     (A) The differences between the inventions defined by the conflicting claims -- a claim in the patent compared to a claim in the application; and

30     (B) The reasons why a person of ordinary skill in the art would conclude that the invention defined in the claim in issue is an obvious variation of the invention defined in a claim in the patent.

35     The claims in the two patent applications clearly differ from each other; in fact, one independent claim from each patent application was copied into the Office action. For example, the independent claims of the present patent application include an element similar to "first associating means for associating a mission critical twin endpoint with each mission critical endpoint"; this feature does not appear in the claims of the other patent application. In addition, the independent claims of the other patent application include an element similar to

"assigning means for assigning a mission criticality characteristic to each discovered endpoint"; this element does not appear in the claims of the present patent application. The simple fact that the claims in the different patent application may have common elements does not provide a basis for an obviousness-type double patenting rejection.

More importantly, the rejection does not provide any reasons why a person of ordinary skill in the art would conclude that the invention defined in the claims of the present patent application is an obvious variation of the invention defined in the claims in the other patent application, as is required by a proper obviousness-type double patenting rejection. The onus is on the Patent Office for explaining the reasoning behind the rejection; without any reasoning against which to argue, Applicant cannot provide any arguments against the hypothetical reasoning. Applicant requests the withdrawal of the double patenting rejection.

#### IV. 35 U.S.C. § 102(b)-Anticipation-Du et al.

The Office action has rejected claims 1-21 under 35 U.S.C. § 102(b) as anticipated by Du et al., "Distributed workflow resource management system and method", U.S. Patent No. 5,826,239, filed 12/17/1996, issued 10/20/1998. This rejection is respectfully traversed.

The Office action begins by analyzing claim 8. Independent claim 8 reads as follows:

8. An apparatus for managing a distributed data processing system, the apparatus comprising:  
discovering means for dynamically discovering endpoints within the distributed data processing system;  
determining means for determining that a first discovered endpoint communicates with a second discovered endpoint;  
monitoring means for monitoring a status of the first discovered endpoint;  
first updating means for updating a status indicator for the first discovered endpoint; and

second updating means for updating a status indicator for the second discovered endpoint based on a communication history between the first discovered endpoint and the second discovered endpoint.

5 Du et al. does not explicitly disclose a discovering means as recited in the first element of independent claim 8, but as noted by the Office action with respect to dependent claim 9, Du et al. does disclose an SNMP (Simple Network Management Protocol) gateway, and it is well-known that an SNMP-compliant device would include a discovery means.

10 However, Du et al. does not disclose the fifth element of claim 8, i.e. "updating a status indicator for the second discovered endpoint based on a communication history between the first discovered endpoint and the second discovered endpoint", notwithstanding the argument in the rejection to the contrary. The rejection states that this claimed feature is disclosed at column 15, lines 2-27, which discloses "status and history". Applicant strongly disagrees that Du et al. discloses the claimed feature. This cited portion of Du et al. states:

15 Each resource group has a name and is characterized by a set of member resources. Capabilities, status, and history are the three attributes based on which the GRM assigns resource groups to work items. The capabilities of a resource group is used to determine the role it can assume, while the status indicates its availability and the current load. Since the resource manager does not have the exact status information of managed resources, it also uses history information of previous assignments as a hint of accuracy of recorded status data.

20 Example history data include the number of times a resource has been assigned a work item but is not available, and average waiting time of previously assigned work items. The specification and enforcement of the history attribute are similar to those of resource status and thus are omitted from the paper.

25 We use name(G), members(G), capabilities(G), status(G), and history(G) to denote the five attributes of resource group G. Each member resource R.epsilon. members(G) is also modeled as an object with six attributes: name, address, manager, capabilities, status, and history.

Although Du et al. discloses some feature that concerns assigning a status value based on some type of history, this feature is not equivalent nor analogous to the claimed feature of "updating a status indicator for the second discovered endpoint based on a communication history between the first discovered endpoint and the second discovered endpoint".

After examining independent claim 8, the Office action then turns its attention to independent claim 10, which reads:

10. A apparatus for managing a distributed data processing system, the apparatus comprising:  
configuring means for configuring monitoring parameters for network interface cards within the distributed data processing system using a network management framework;  
discovering means for dynamically discovering a set of discovered endpoints within the distributed data processing system;  
designating means for designating a plurality of discovered endpoints as mission critical endpoints; and  
first associating means for associating a mission critical twin endpoint with each mission critical endpoint, wherein a mission critical twin endpoint is a discovered endpoint that has a communication history with a mission critical endpoint with which the mission critical twin endpoint is being associated.

Applicant asserts that Du et al. does not disclose any features with respect to mission critical endpoints, as required by the third and fourth elements of claim 10, notwithstanding the argument in the rejection to the contrary.

The rejection states that the third element of claim 10, i.e. "designating means for designating a plurality of discovered endpoints as mission critical endpoints", is disclosed at column 19, lines 50-67, which supposedly discloses "rules nodes with a list of condition-action rules". Assuming *arguendo* that Du et al. does disclose the feature of "rules nodes with a list of condition-action rules", this feature is clearly not equivalent nor analogous to a feature of designating discovered endpoints as mission critical endpoints. More importantly, Du et al. simply

does not disclose the claimed feature; the cited portion of Du et al. states:

5       An OpenPM process is a directed graph comprising a set of nodes connected by arcs. There are two kinds of nodes: work nodes 41 and rule nodes 42. A work node defines work to be performed by external resources, while a rule node is used to define a process flow that is more complex than a simple sequence, such as concurrent process execution and synchronization of tasks. Process flows can also be controlled via events, which are raised and subscribed by rule nodes.

Du et al. clearly does not disclose anything concerning the designation of mission critical endpoints.

15       In addition, the rejection states that the fourth element of claim 10, i.e. "associating a mission critical twin endpoint with each mission critical endpoint, wherein a mission critical twin endpoint is a discovered endpoint that has a communication history with a mission critical endpoint with which the mission critical twin endpoint is being associated", is disclosed at column 19, lines 28-36, which supposedly discloses "when certain critical resources are available". Assuming *arguendo* that Du et al. does disclose the feature of "when certain critical resources are available", this feature is clearly not equivalent nor  
25       analogous to a feature of associating a mission critical twin endpoint to another endpoint based on a communication history between the two endpoints. More importantly, Du et al. simply does not disclose the claimed feature; the cited portion of Du et al. states:

30       Third, workflow events also allow WFMSs to do things such as resource controlled process execution which are impossible if using database triggers only. Resource controlled process execution starts a process or an activity only when certain critical resources are available. This is possible by implementing a workflow process that monitors resource status. The resource monitoring process will listen to events for the critical resources and fire processes/activities as soon as the resources become available.

Again, Du et al. clearly does not disclose anything concerning the designation of mission critical endpoints.

5        Du et al. clearly does not disclose features as required by the language of independent claims 8 and 10 of the present application. As stated at MPEP § 2131: "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 10 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Hence, for this and other reasons, Du et al. cannot be used as an anticipatory reference, and the rejections of claims 8 and 10 have been overcome, whereby Applicant requests the 15 withdrawal of the rejections.

Dependent claims 9 and 11-14 recite further limitations that are not present within independent claims 8 and 10 from which they depend. However, since the dependent claims incorporate the 20 features of the independent claims, the rejections of the dependent claims are similarly deficient for the same reasons that were argued above with respect to the independent claims.

Independent claims 1 and 3 are directed to a method; claims 8 and 10 are directed to an apparatus; and claims 15 and 17 are 25 directed to a computer program product. The Office action uses an anticipation argument against claims 1-7 and 15-21 by relying the arguments that are used against claims 8-14. Applicant's argument with respect to the rejection of claims 8-14 is similarly applicable against the rejection of claims 1-7 and 30 15-21.



V. 35 U.S.C. § 103(a)-Obviousness-Stupek in view of Orr

The Office action has rejected claims 1-21 under 35 U.S.C. § 103(a) as unpatentable over Stupek et al., "Programmable operational system for managing devices participating in a network", U.S. Patent Number 6,526,442, filed 07/07/1998, issued 02/25/2003, in view of Orr et al., "Engineering and manufacturing change control mechanism", U.S. Patent Number 5,191,534, 03/02/1993, filed 08/21/1990, issued 03/02/1993. This rejection is traversed.

The Office action begins by analyzing claim 8. Independent claim 8 reads as follows:

8. An apparatus for managing a distributed data processing system, the apparatus comprising:

discovering means for dynamically discovering endpoints within the distributed data processing system;

determining means for determining that a first discovered endpoint communicates with a second discovered endpoint;

monitoring means for monitoring a status of the first discovered endpoint;

first updating means for updating a status indicator for the first discovered endpoint; and

second updating means for updating a status indicator for the second discovered endpoint based on a communication history between the first discovered endpoint and the second discovered endpoint.

Applicant asserts that Stupek et al. does not disclose the fifth element of claim 8, i.e. "updating a status indicator for the second discovered endpoint based on a communication history between the first discovered endpoint and the second discovered endpoint", notwithstanding the argument in the rejection to the contrary. The rejection states that this claimed feature is disclosed at column 16, lines 10-67, which supposedly discloses "database transaction log", according to the Office action. Applicant strongly disagrees that Stupek et al. discloses the claimed feature. This cited portion of Stupek et al. states:

An exemplary list of constructions, functions or processes followed by a brief description or the element that uses the construction is as follows: ADDeviceIdProcessor.construction device discovery; ADReceiver.construction device discovery;

5 AppLaunch.construction launches an arbitrary application for execution; Broadcaster.construction send info to user interface on browser for display (overall network status); BuildGroupsWithOperations.construction OGE; CancelAnOperation.construction OGE; dataCollection.construction get device info using SNMP; DeviceNameGenerator.construction used by user

10 interface on browser for listing devices; deviceStatusPolling.construction poll a device for its status; DiscoveredDevice.construction discovery function; DMIDataCollection.construction get device info using DMI; DmiRequestor.construction DMI utility; DMIStatusPolling.construction

15 poll a DMI device; ExecuteOperationNow.construction used by user interface on browser to execute an operation immediately; ExecuteUpdateGenerator.construction used by user interface on browser to execute an update; FilterGenerator.construction used by user interface on browser operational group wizard to build operational group;

20 FilterSaver.construction part of previous; FuncConfigGenerator.construction associate an operation with a filter user interface on browser build operational group wizard; GenerateOperations.construction operational group; getCachedItem.construction utility function; GlobalStatus.construction

25 user interface on browser pi chart display back end; hmmoLinkProcessor.construction polls device to determine what hmmo's are installed; HttpHandler.construction discovery function; IpxSaper.construction discovery function; IpxSapHandler.construction-discovery function;

30 MonitorOperationStatus.construction determines what percent of an operation is completed for display by user interface on browser; NetworkingProductsIdentify.construction after a device is discovered, this construction performs a more detailed examination of the device to identify which specific networking is product it is;

35 OpenOperationStatus.construction user interface on browser; OperationConfigSaver.construction user interface on browser operational group wizard; PartitionOperationAndRun.construction OGE; PerformOperations.construction OGE; Pinger.construction performs network pinging for device discovery; QueryGenerator.construction user interface

40 on browser operational group wizard for building an operational group; RemoveDiskThreshold.construction removes disk threshold on device; SapHandler.construction discovery function; SaveJob.construction OGE; ScheduleViewDataGenerator.construction user interface on browser operational group wizard to set conditions when to run;

45 SendEmail.construction send an email; SetDiskThreshold.construction sets disk threshold on device; SnmpRequester.construction discovery function; StartDiscovery.construction discovery function; TransactionLogCheck.construction housekeeping on database transaction log; TrapHandler.construction handles SNMP trap;

50 TrapRequester.construction handles SNMP trap; UpdateOperationStatus.construction user interface on browser support; ViewInitialization.construction user interface on browser support for views; ViewUpdater.construction user interface on browser support for views; and WebServerStart.construction used to start the web server

55 process.

It is unclear how the features in Stupek et al. concerning a database history are equivalent or analogous to the claimed features of the present invention concerning "updating a status

indicator for the second discovered endpoint based on a communication history between the first discovered endpoint and the second discovered endpoint".

5 The rejection then continues by stating that Stupek et al. does not disclose the second element of claim 8, i.e. "determining means for determining that a first discovered endpoint communicates with a second discovered endpoint". The rejection then states that Orr et al. discloses this feature by disclosing a feature of "automatically tracking and updating the  
10 status of the engineering change and each associated affected item and corresponding location affected item in response to changes in status initiated at said first and second pluralities of workstations." Assuming *arguendo* that Orr et al. discloses this feature as stated in the rejection, it is entirely unclear  
15 how this feature is equivalent or analogous to the second element of claim 8.

Moreover, the structure of the obviousness rejection is illogical on its face. The rejection states that Stupek et al. discloses the fifth element of claim 8, i.e. "updating a status  
20 indicator for the second discovered endpoint based on a communication history between the first discovered endpoint and the second discovered endpoint", yet the rejection also states that Stupek et al. does not disclose the second element of claim 8, i.e. "determining means for determining that a first  
25 discovered endpoint communicates with a second discovered endpoint". Applicant asserts that it would not be possible for a system to monitor a communication history between two endpoints if the system had not determined that the two endpoints were communicating.

30 After examining independent claim 8, the Office action then turns its attention to independent claim 10, which reads:

10. A apparatus for managing a distributed data processing system, the apparatus comprising:  
    configuring means for configuring monitoring parameters for network interface cards within the distributed data processing system using a network management framework;  
    discovering means for dynamically discovering a set of discovered endpoints within the distributed data processing system;  
    designating means for designating a plurality of discovered endpoints as mission critical endpoints; and  
    first associating means for associating a mission critical twin endpoint with each mission critical endpoint, wherein a mission critical twin endpoint is a discovered endpoint that has a communication history with a mission critical endpoint with which the mission critical twin endpoint is being associated.

Applicant asserts that neither Stupek et al. nor Orr et al. disclose any features with respect to mission critical endpoints, as required by the third and fourth elements of claim 10, notwithstanding the argument in the rejection to the contrary.

The rejection states that the third element of claim 10, i.e. "designating means for designating a plurality of discovered endpoints as mission critical endpoints", is disclosed at column 7, line 50, to column 8, line 14, of Stupek et al., which supposedly discloses "defining the relationship between the executable components". Assuming *arguendo* that Stupek et al. does disclose the feature of "defining the relationship between the executable components", this feature is clearly not equivalent nor analogous to a feature of designating discovered endpoints as mission critical endpoints. More importantly, Stupek et al. simply does not disclose the claimed feature; the cited portion of Stupek et al. states:

Referring now to FIG. 2, a more detailed block diagram is shown of exemplary portions of the management server 102 for performing programmable event driven management processing and as it operates in conjunction with the client system 106. The management server 102 includes an executable component store 202, a construction editor 204, a construction store 206 for permanently storing constructions, an initializer 208, and an automation engine (AE) 210. The AE 210 includes an active construction store

211 and 10 an interconnect engine 212. The active construction store 211 is a memory such as a random access memory (RAM) or the like. An executable component is a software module that performs a basic function or arbitrary processing and that allows its input and output parameters to be discovered by another program without compiling or otherwise processing the module (i.e., "self describing"). One or more predetermined executable components are is stored in the executable component library or store 202 and are accessible by a software program, such as the construction editor 204, to form collections of one or more executable components called "constructions." Once an executable component is defined and compiled, instances of the executable components are copied and used in the constructions. This provides an advantage in that executable components do not have to be recompiled to create new constructions. The construction editor 204 accesses the executable component store 202 and accepts input commands that specify and define a relationship between the executable components that constitute the construction being assembled. These commands can be supplied by a human operator, a batch command file, or any other suitable method.

Stupek et al. clearly does not disclose anything concerning the designation of mission critical endpoints.

In addition, the rejection states that the fourth element of claim 10, i.e. "associating a mission critical twin endpoint with each mission critical endpoint, wherein a mission critical twin endpoint is a discovered endpoint that has a communication history with a mission critical endpoint with which the mission critical twin endpoint is being associated", is disclosed at column 16, lines 4-25, Orr et al., which supposedly discloses the feature of "automatically tracking and updating the status of the engineering change and each associated affected item and corresponding location affected item in response to changes in status initiated at said first and second pluralities of workstations." Assuming *arguendo* that Orr et al. discloses this feature as stated in the rejection, it is entirely unclear how this feature is equivalent or analogous to the fourth element of claim 10; this feature is clearly not equivalent nor analogous to

a feature of associating a mission critical twin endpoint to another endpoint based on a communication history between the two endpoints.

Moreover, the section of Orr et al. that was used against  
5 the fourth element of claim 10, i.e. "associating a mission critical twin endpoint with each mission critical endpoint, wherein a mission critical twin endpoint is a discovered endpoint that has a communication history with a mission critical endpoint with which the mission critical twin endpoint is being  
10 associated", is the same section of Orr et al., i.e. column 16, lines 4-25, that was used against the second element of claim 8, i.e. "determining means for determining that a first discovered endpoint communicates with a second discovered endpoint". This is illogical. Again, Orr et al. clearly does not disclose  
15 anything concerning the designation of mission critical endpoints or the determination of a communication history between endpoints.

Dependent claims 9 and 11-14 recite further limitations that are not present within independent claims 8 and 10 from which  
20 they depend. However, since the dependent claims incorporate the features of the independent claims, the rejections of the dependent claims are similarly deficient for the same reasons that were argued above with respect to the independent claims.

Independent claims 1 and 3 are directed to a method; claims  
25 8 and 10 are directed to an apparatus; and claims 15 and 17 are directed to a computer program product. The Office action uses an obviousness argument against claims 1-7 and 15-21 by relying the arguments that are used against claims 8-14. Applicant's argument with respect to the rejection of claims 8-14 is  
30 similarly applicable against the rejection of claims 1-7 and 15-21.

Examiner bears the burden of establishing a *prima facie* case of obviousness

The examiner bears the burden of establishing a *prima facie* case of obviousness based on the prior art when rejecting claims under 35 U.S.C. § 103. *In re Fritch*, 972 F.2d 1260, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992). Only when a *prima facie* case of obviousness is established does the burden shift to the applicant to produce evidence of nonobviousness. *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). If the Patent Office does not produce a *prima facie* case of unpatentability, then without more the applicant is entitled to grant of a patent. *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Grabiak*, 769 F.2d 729, 733, 226 U.S.P.Q. 870, 873 (Fed. Cir. 1985). In response to an assertion of obviousness by the Patent Office, the applicant may attack the Patent Office's *prima facie* determination as improperly made out, present objective evidence tending to support a conclusion of nonobviousness, or both. *In re Fritch*, 972 F.2d 1260, 1265, 23 U.S.P.Q.2d 1780, 1783 (Fed. Cir. 1992).

Stupek et al. and Orr et al. clearly fail to disclose at least one feature of the present invention as recited within each independent claim, notwithstanding the arguments presented by the Office action, thereby rendering Stupek et al. and Orr et al. incapable of being used as primary and secondary references as argued by the current rejection. Moreover, a hypothetical combination of Stupek et al. and Orr et al. would also fail to reach the claimed invention of the present patent application. As should be recognized, because both the primary and secondary references in the rejection fail to disclose the claimed features against which the references were applied, and because the references fail to be combinable to produce these claimed

features, the rejection fails to fulfill the requirements of a proper obviousness argument.

With respect to the claims of the present patent application, Applicant respectfully submits that it would not have been obvious for one having ordinary skill in the art to have used the applied prior art references to reach the claimed invention. Hence, a rejection of the claims cannot be based upon the cited prior art to establish a *prima facie* case of obviousness. Therefore, a rejection of the claims under 35 U.S.C. § 103(a) has been shown to be insupportable in view of the cited prior art, and the claims are patentable over the applied references. Applicant respectfully requests the withdrawal of the rejection of the claims.

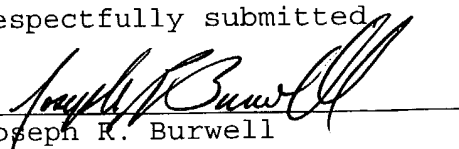
#### VI. Conclusion

It is respectfully urged that the present patent application is patentable, and Applicant kindly requests a Notice of Allowance.

For any other outstanding matters or issues, the examiner is urged to call or fax the below-listed telephone numbers to expedite the prosecution and examination of this application.

DATE: September 7, 2004

Respectfully submitted

  
Joseph R. Burwell

Reg. No. 44,468

ATTORNEY FOR APPLICANT

Law Office of Joseph R. Burwell

P.O. Box 28022

Austin, Texas 78755-8022

Voice: 866-728-3688 (866-PATENT8)

Fax: 866-728-3680 (866-PATENT0)

Email: joe@burwell.biz